

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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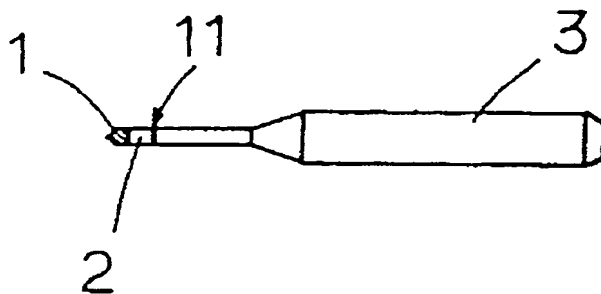
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APPLICANT : SUMITOMO ELECTRIC IND LTD;

INVENTOR : YATSU SHUJI;

INT.CL. : B23B 51/00 B22F 7/00 B22F 7/08  
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TITLE : COMPOSITE FINE SIZE DRILL



ABSTRACT : PURPOSE: To provide an increased life for a drill, by a method wherein the diamond-sintered blank of a cutting edge containing 70vol% or more of diamond and a drill body are joined together by electronic beam welding.

CONSTITUTION: When a diamond sintered material 1 containing 70vol% or more diamond is joined with a support member 2 of a drill body 3 through a joint surface 11, they are joined together by electronic beam welding. After joining, the resultant work is machined in a drill shape to produce a composite fine size drill with a diameter of 3mm or less. In the electronic beam welding, since a member itself, intended to be welded, is molten for joining, joining strength, being that of the welding member itself, is provided, and this provides an increased life for a drill.

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